

CONFIDENTIAL

1. **TITLE** - Provide a one-line descriptive summary of the invention. Where possible use any key words or phrases that would be helpful in searching or sorting information relevant to this invention.

Dynamic Indication for Capacitor Charging Status

2. **INVENTORS** - List the names of all inventors and the full names and addresses of any inventors outside Angeion.

Name Address

John Humeau Chen
Scott Keeler
Lurt Tapke

3. **BACKGROUND** - Indicate the approximate dates, if any, that the invention was (a) conceived, (b) successfully reduced to practice, i.e. built, demonstrated or used, (c) offered for sale or sold to a third party, and/or (d) publicly used or demonstrated.

(a) Conception of idea June 98
(b) Reduction to practice: March 99
(c) Sale of invention:
(d) Public use of invention:

4. **PROBLEM SOLVED** - Briefly state the problem(s) that are solved by this invention, or the advantage(s) that this invention has over the current practice in this field.

you charging / no charging
Currently cap charging can be displayed in an LED indicator
This invention provides a cap charge of a complete set
of cap. charge status indicating start charging, charging status, and
cap. vol level, complete charge, discharging, time charging time, etc.

5. **DRAWINGS** - List and attach any drawings, figures, or photographs which are helpful in describing or understanding the invention.

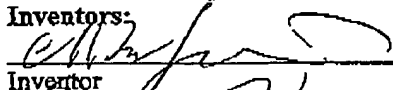


See Attached

6. **DESCRIPTION** - Describe in an attached document the essential elements of the invention and how the invention works. For an apparatus invention, list the significant physical elements and their relationships. For a system or method invention, list the significant functions of the system and how each is accomplished. For a programming invention, provide a flowchart or block diagram and describe what each module does.
7. **PATENTS** - Are you presently aware of any patents that are generally related to the subject matter of your invention? YES X NO If YES, please list those patents below.
8. **BOOKS** - Do you have in your personal library or are you aware of any books including textbooks or reference books, that are generally related to the subject matter of your invention? YES X NO If YES, please identify the relevant pages from each volume which you consider to be pertinent to understanding your invention.
9. **PERIODICALS** - Are you aware of any specific articles in periodicals or journals, trade magazines or newspapers that are generally related to the subject matter of your invention? YES X NO If YES, please identify the periodical, relevant articles and pages from each volume which you consider to be pertinent to understanding your invention.
10. **COMPETITIVE PRODUCTS** - Are there any other products which you perceive as competitive products to your invention? YES X NO If YES, please identify any written material that you are aware of regarding those products. For example, written material may include reference manuals, promotional literature or demonstration materials.

Witnessed: The Witnesses whose signatures appear below have read and understood this Invention Disclosure.

Witnesses:

Witness	Date
Witness	Date

Inventors:	
	3/24/99
Inventor	Date
	3/24/99
Inventor	Date
	3/22/99
Inventor	Date
Inventor	Date

In the current practice, ICD Capacitor Charging status has been limited to Charge/No Charge only, which doesn't give user much information about the capacitor. This software invention provides user a graphical display to inform user about ICD capacitor status including: Start Charging, Charging Status, Starting voltage/energy level, Target voltage/energy level, Capacitor voltage level during charging, charge elapsed time and charging circuit status.

As seen in the attached drawing, this dialog box contains information described above. When user requests a Capacitor Reform, Shock delivery; this dialog box will popup to indicator current capacitor status.

This invention has the following advantages:

1. Provide user a graphical way to indicator current capacitor status,
2. Provide user information about capacitor starting and target levels,
3. Update current capacitor level in real time – user can anticipate the up coming shock ,
4. Inform user time elapsed for charging,
5. If charging time is much longer than expected – usually due to low battery, the charging circuit problem can be detected.

Starting Voltage/Energy

Target Voltage/Energy

Start, Charging, Complete

Capacitor Charging Status

Capacitor Charging: _____

From : _____ To: _____

Time Elapsed: _____

Charging Circuit: _____

Cancel

Progress Bar: Current
Voltage/Energy Level

Time Elapsed

Normal, Slow